BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Fourth Annual Report	)	
To Congress on Status of	)	
Competition in the	)	**IB Docket No. 10-99**
Satellite Services Industry	)	
	)	
	)	
	)	

To: The Commission

COMMENTS OF CAPROCK COMMUNICATIONS, INC.

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SUMMARY

CapRock Communications, Inc. ("CapRock") urges the Commission to recognize in its Fourth Report to Congress under the Com Sat Act that significant anti-competitive issues exist in the market for international space segment satellite communications services.

The Commission should look to the record it has already developed regarding such services in the 11th Orbit Act Inquiry, which establishes that anti-competitive practices by dominant satellite operators place other non-dominant satellite network services providers ("SNSPs") at a significant competitive disadvantage, resulting in higher market prices and fewer end customer solution choices. This includes actions by dominant operators through their wholly-owned government service focused entities.

Industry consolidation, unchecked by regulators, has had a major detrimental effect on competition and, as a result, capacity, coverage, price and the availability of innovative technologies has suffered.

CapRock's Comments below demonstrate significant flaws in the three primary data points used by dominant satellite providers to claim the existence of effective space segment competition. Terrestrial services do not constitute an effective competitive substitute for satellite offerings in the "thin route" markets of remote commercial, industrial and military sites, disaster relief, ocean regions, and other similar areas. Reliance on the total number of geosynchronous satellites in service as a benchmark for service availability misrepresents the actual level of competition in any given market. In fact, at least 80% of the market in several key regions is controlled by three dominant satellite operators. The number of new satellite launches also misrepresents actual available market capacity as most new satellites are deployed to replace retiring spacecraft and do not add any incremental capacity to the overall space segment market.

CapRock recommends that the Commission initiate one or more proceedings to address structural issues in the provision of international space segment capacity and proposes the following four policies to remedy competitive concerns in the near-term:

- No further consolidation in the satellite space segment industry should occur. If allowed, SNSPs and their customers will only pay more for and have less access to essential segment space.

- As long as affiliates of dominant satellite operators compete as providers of satellite network services, all requests for FSS space segment capacity should be received and handled by the satellite operator, not its captive SNSP. Captive SNSPs should not have a role in setting the rates or terms and conditions for space segment made available to other SNSPs or other customers.

- Satellite operators should not obligate SNSPs to acquire pre-determined bundles of FSS space segment capacity either in terms of minimum commitments of

aggregate capacity or in terms of a fixed combination of their own and another satellite operator's capacity.

- Satellite operators, or their wholly-owned subsidiaries, should not resell space segment capacity of other satellite operators, which further diminishes competition and creates the potential for in appropriate access to competing satellite operator prices.

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CapRock Communications, Inc. ("CapRock") submits these Comments into the record for the Fourth Satellite Competition Report ("Fourth Report") that the Federal Communications Commission ("Commission") will submit to Congress under Section 4 of the Communications Satellite Act of 1962 ("Com Sat Act"), as amended.[1] Consistent with the Public Notice seeking input regarding the extent of competition in the markets for satellite communications,[2] CapRock's comments focus on international fixed satellite services, particularly the manner in which international fixed satellite space segment capacity is utilized by and made available to CapRock and other satellite network services providers ("SNSPs").

[1] Communications Satellite Act—Amendment, Pub. L. No. 109-34, 119 Stat. 377 (2005) ("Amendment Act"). The Amendment Act amended the Communications Satellite Act of 1962, 47 U.S.C. § 701 *et seq*.; Com Sat Act, § 4(a).

[2] Public Notice, DA 10-1353 (rel. July 22, 2010) ("Notice").

I. Introduction

CapRock is a U.S. company, recently acquired as a wholly-owned subsidiary of Harris Corporation, also a U.S. company. CapRock is one of the world's largest SNSPs with nearly 30 years of experience in communications and over 700 employees worldwide. CapRock acquires space segment services from Intelsat, SES WorldSkies ("SES"), Eutelsat, and various regional satellite providers including Telesat. CapRock owns and operates a multi-million dollar global infrastructure that includes five teleports, four 24 x 7 network operations centers ("NOCs"), and twelve regional field service centers. It is the world's leading provider of satellite communications services to "remote and harsh regions" providing end-to-end satellite communications services to Offshore Energy, Transoceanic Shipping, Heavy Construction and U.S. Government end-users. Examples of other SNSPs providing fully managed, end-to-end satellite network services are Globecomm, DRS, TCS and Spacenet.[3]

The "remote and harsh regions" of the world to which CapRock provides its satellite services do not have terrestrial alternatives. Either there is no terrestrial wireless or wireline infrastructure or the existing infrastructure is so limited in terms of available bandwidth or reliability that a managed satellite service is the only viable option for the end users' requirements.[4] CapRock's services to "remote and harsh regions" are analogous to the satellite services historically provided to "thin route" locations or countries in that satellite service is the only viable means of meeting these international communications requirements, except that

[3] In regard to the satellite services market description set out in Figure 1 of the Notice, CapRock's operations most closely correspond to that of a Fixed Satellite Services integrator (domestic and international) providing network services to government and enterprise customers.

[4] This is one reason why CapRock's ESV (earth stations on vessels) services have achieved wide acceptance within the maritime industry.

CapRock's services are integrated, customer-specific, end-to-end solutions, as opposed to international switched services, video services or international leased line services.

CapRock provides network services in over 120 countries, across multiple satellite fleets and with a sizable portfolio of satellite capacity across the C, Ku, Ka, and X frequency bands. CapRock secures space segment capacity through negotiations with satellite operators for which the duration, capacity and number of satellites vary. Through its wholly-owned subsidiary, CapRock Government Solutions, Inc., CapRock serves the remote communications needs of the U.S. Government, including the Department of Defense and the Department of State, and federal civilian and intelligence agencies, including the Department of Homeland Security, through various prime contracts and subcontracts.

CapRock's fully managed, end-to-end network services are integrated offerings of remote satellite transmission equipment, associated customer premises equipment (routers, handsets and terminals) ("CPE"), installation and maintenance, network design and implementation, space segment, terrestrial interconnection to both public and private networks, and application services such as telephony, IPTV and MPLS. Space segment represents a "raw material" used in the development and delivery of these managed network services. Inasmuch as CapRock's offerings are highly individualized packages of integrated space segment, remote transmission equipment, CPE and terrestrial services, CapRock negotiates customer-specific service arrangements to meet each customer's requirements. CapRock is not a simple reseller of space segment capacity, but a full service, value-added managed SNSP.

II. Comments

A. The Record Developed in the 11th Orbit Act Inquiry Establishes that the Market for International Space Segment Capacity Available for International Network Services is Not Subject to "Effective Competition."

In response to the request for comments in connection with the Commission's 11th Report to Congress under the ORBIT Act,[5] CapRock, other SNSPs and other satellite services providers submitted Comments raising significant questions as to whether there is "effective competition" in the market for international fixed satellite service ("FSS") space segment capacity, particularly FSS space segment capacity capable of supporting satellite network services between the United States and other regions of the world. This space segment capacity is an essential input for the international network services that CapRock and its competitors provide to the agencies and departments of the United States government and to domestic and multi-national business customers based in or having substantial operations in the United States. International wireline (fiber, coaxial cable or copper) and terrestrial wireless services do not provide substitute "platforms" for the delivery of these international network services provided by SNSPs.

CapRock and other SNSPs highlighted the substantial international space segment capacity controlled by the dominant satellite operators that is essential to services originating or terminating in the United States. CapRock's Comments explained how significant anti-competitive practices of one of the dominant satellite operators placed CapRock and other SNSPs at a major competitive disadvantage to that operator's wholly-owned satellite network services provider – essentially their internal or captive SNSP ("Captive SNSP"). In particular, CapRock emphasized the following points:

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5 Public Notice, Report No. SPB-234, DA 10-448 (rel. April 1, 2009) ("Orbit Act Inquiry").

- In connection with U.S. government procurements, CapRock and other SNSPs were required to look solely to this dominant operator's Captive SNSP to obtain international space segment capacity from the satellite operator, even though CapRock and other SNSPs were competing directly with the Captive SNSP for the same business.[6]
- In one procurement, the same Captive SNSP would only offer to competing SNSPs a fixed collection of space segment capacity that was grossly suboptimal in terms of defined space segment and price, referred to as the "Forced Bundle." Despite this requirement, the Captive SNSP did not bid this space segment "Forced Bundle" in its own proposal for the same procurement.[7] In subsequent U.S. government procurements, CapRock was not allowed to deal directly with the commercial satellite fleet operators for space segment capacity, but was required to secure the capacity indirectly from that operator's Captive SNSP, which routinely offered the space segment at above-market rates.[8]
- CapRock noted the adverse effects of the major satellite operators' control over orbital slots suitable for international service and the need for regulatory reform to ensure that satellite operators employ advanced technologies as a prerequisite for maintaining orbital slots for international satellite.[9] The Orbit Act Report noted

[6] Orbit Act Inquiry Comments of CapRock.

[7] Id. at pp 9-11.

[8] *Id. at* 11. *See also* 11th Orbit Act Report at 24-26 (e.g., Intelsat required CapRock and other competitors of IGEN to purchase defined suboptimal mix satellite space segment capacity in order to secure essential Intelsat space capacity for Federal Government procurement (the "Forced Bundle")). Another manifestation of the Intelsat's dominant position in international space segment capacity is that although Intelsat deals directly with CapRock for Intelsat space segment for non-government procurements, Intelsat requires CapRock and other SNSPs to look exclusively to IGEN—their direct competitor—for Intelsat space segment in connection with U.S. government procurements.

[9] CapRock's Comments, pp. 14-15.

that other parties raised the same concern,[10] acknowledging that the prospects for substantial competitive entry in the market for international FSS space segment capacity are challenging at best, if not highly improbable.

- CapRock also noted the major satellite operator's reluctance to make substantial commitments to innovative satellite technologies that would enhance the capacity of its satellite fleet, particularly in light of the substantial revenues that at least one global satellite operator was publicly reporting.[11]

The Commission's 11th Orbit Act Report noted the dismissive comments and responses submitted by the global satellite operator, which offered no explanation or justification for its anti-competitive business practices and tactics, asserting the Commission lacked jurisdiction to regulate its anti-business practices. [12]

B. From the Perspective of SNSPs, the Market for Usable Space Segment is Not Subject to Effective Competition.

Serious questions exist as to whether there is "effective competition" in the market for international fixed satellite service space segment. Satellite fleet operators, which control the supply of satellite transponder capacity without regulation, argue that competition is robust. However, for the many SNSPs who depend on space segment as an essential "raw material" in providing satellite communication networks for government and enterprise customers, competitive sourcing and pricing are not the reality. Satellite capacity usable for high performance voice, video and data networks is supplied principally by the dominant global satellite operators. These operators have not added meaningful incremental supply to the market,

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10 11th Orbit Act Report, p. 23.

11 CapRock's Comments, pp. 12-14.

12 *Id.* at 26-28.

have consistently raised prices to ensure their own financial performance, and have frequently engaged in anti-competitive behaviors targeted against SNSPs who are among the satellite operators' major customers.

Yet, the dominant global satellite fleet operators invariably maintain that the FSS capacity is growing and that multiple operators ensure a competitive market for this space segment, relying on market data and reference points that seem reasonable at first glance. FSS operators typically make three primary claims in support of this position:

- **Claim 1**: Satellite fleet operators compete against terrestrial alternatives.
- **Claim 2:** Competition exists due to the large number of satellites and regional operators.
- **Claim 3:** New satellite launches are offering more choices and delivering more capacity to the market.

From the perspective of SNSPs, the primary consumers of satellite capacity for data networking, the market for usable space segment capacity is not, in fact "competitive." Global SNSPs are dependent on a small number of dominant satellite fleet operators who control an increasingly tight supply of space segment over the key addressable markets for satellite communications. Satellite operators' claims do not relate to marketplace realities.

I. Terrestrial Technologies Do Not Offer Competition in Satellite Addressable Markets.

Satellite technology, by its nature, brings communications to regions that have little or no existing terrestrial-based infrastructure. Historically, these have been referred to as "thin route" markets. In more mature and urban markets, like the U.S. and Europe, where terrestrial technologies have been long established, satellite is merely a niche platform for data communications. Satellite is not competitive for data networking services in developed areas having substantial telecommunications infrastructure. It is rendered non-competitive by robust terrestrial infrastructure. Mature markets with terrestrial infrastructure are simply not effectively addressable by satellite. The addressable markets for FSS-based satellite technologies are in areas or regions with little pre-existing telecommunications infrastructure, such as major industrial sites, remote military bases, disaster relief scenes, developing countries and ocean regions. In satellite addressable markets, global dominant players control the bulk of the space segment "raw material" critical for SNSPs to provide end-to-end communications services to end-user customers.

II. Accessible Capacity Is Available Only From a Small Number of Dominant Providers.

The second claim often offered by satellite operators in support of competition is the aggregate number of geosynchronous satellites in orbit provided by multiple global and regional fleet operators. Today, there are 287 geosynchronous satellites in service at various orbital positions around the globe, controlled by 65 spacecraft operators. These satellites typically have between 20 and 50 transponders each, with capacity ranging from 20MHz to 72MHz per transponder. The dominant players point to these statistics as "evidence" that the market is large and offers multiple sources of supply.

The reality is that of the 287 satellites in orbit, only about 169 (less than 60%) are truly usable for U.S.-based SNSP provided data and voice networking services.

Numerous satellites in the total combined fleet are designed for broadcast satellite service ("BSS") and other special purposes, such as DTH, DARS, or MSS, are not suitable for two-way data networking applications. CapRock reasonably estimates that 46 satellites fall into this category and are unusable for SNSP services.

Additionally, a much larger number of satellites, approximately 72, are spacecraft that are either nationalized assets controlled by foreign governments or only provide coverage over “closed” markets, such as Brazil, Russia, India, and China. These satellites must also be removed from the actual market supply, as they cannot be used by U.S.-based SNSPs to provide services to their end customers – especially the U.S. government.

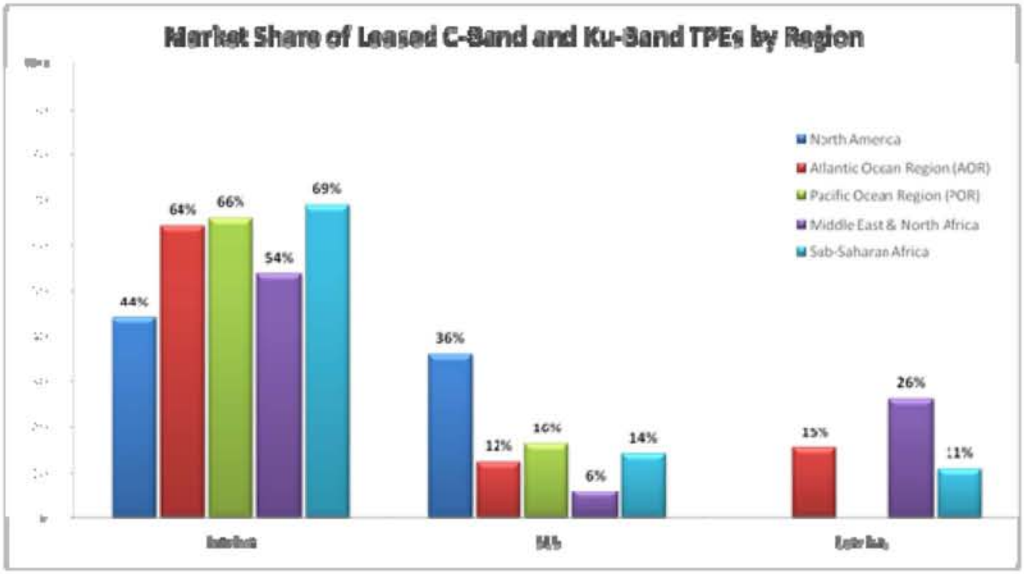
Figure 1. Breakdown of Active Geosynchronous Satellites in Orbit

Of the remaining 169 SNSP usable global satellites, approximately 122 or 72% of these spacecraft are owned by three dominant satellite fleet operators. The condition of such a large market share among the top operators is due primarily to supplier consolidation and merger and acquisition activity, presently unchecked by regulators.

The lack of effective competition becomes even more acute when the key addressable regions for satellite communications are examined. In several markets, the dominant satellite fleet operators control 80% or more of the available satellite capacity, making competition in these regions extremely limited. Listed below is the collective market share of the dominant satellite operators across five key regions.

- North America (2 Dominant Operators) >80%
- Middle East & North Africa (2 Dominant Operators) >86%
- Sub-Saharan Africa (3 Dominant Operators) >90%
- Atlantic Ocean Region (3 Dominant Operators) >90%
- Pacific Ocean Region (2 Dominant Operators) >80%

Figure 2. Market Share of “Usable” Leased C-Band and Ku-Band TPEs by Region.[13]



When unusable or inaccessible spacecraft are subtracted from the total, it becomes clear that the global space segment market is dominated by a very small number of players, with regional operators having little practical impact on the competitive landscape.

For SNSPs, sourcing available capacity at competitive rates is further complicated by the fact that each of the dominant satellite operators markets and sells the other operators’ capacity. This provides the dominant space segment suppliers with unprecedented visibility into each of the other’s respective wholesale and retail market prices. This practice adversely affects the pricing of such a limited supply input, to the detriment of competition and end users.

III. New Satellite Launches Misrepresent Actual Available Capacity in the Market.

While satellite fleet operators typically point to the number of new satellites launched in recent years as evidence of “market growth,” the total amount of available capacity has not materially increased. Many new launches are merely replacements for existing satellites being retired from service. A close review of the records of recent launches over the past three years shows that a significant portion involved satellites with an “N” or “R” designation, replacing an

[13] Northern Sky Research (NSR), *Global Assessment of Satellite Supply and Demand, 6th Edition*, 2009.

existing satellite in an existing orbital slot. For example one of the three dominant satellite fleet operators has scheduled eleven (11) satellite launches between 2010 and 2014. Of these 11, eight (8) are for replacement satellites, adding only three (3) incrementally new satellites to their fleet. Similarly, in the annual report of one of the other dominant players, it was noted that nine (9) new satellites had been ordered as of December 31, 2009, six (6) of which are replacements for retiring spacecraft.   Even for those new satellites that are incremental to the total fleet, a significant amount of capacity on-board the new spacecraft is "pre-sold" prior to launch, and therefore not available to the market at large.

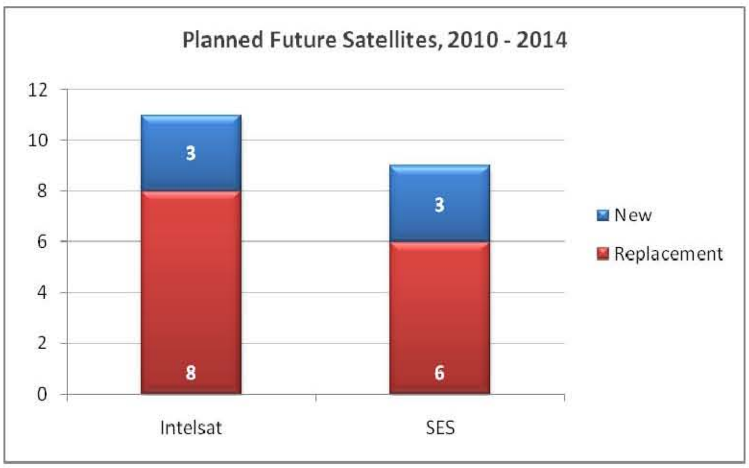


Figure 3. Planned Future Satellites, 2010 - 2014

In 2009, for all three dominant satellite fleet operators, the utilization rates on their existing C and Ku band satellites exceeded 80%, despite several new or replacement spacecraft launches. At this utilization rate, the "full satellite equivalent" capacity actually available in the overall market drops from 169 useable FSS satellites to only 33 satellites. In reality, this low number still overstates available aggregate supply, as the 33 full satellite equivalent of capacity is highly fragmented in small amounts of bandwidth spread across the entire orbital arc. The net result is that the usable supply for FSS space segment remains increasingly constrained, with little relief in sight. This tight capacity supply is compounded by routine price increases.

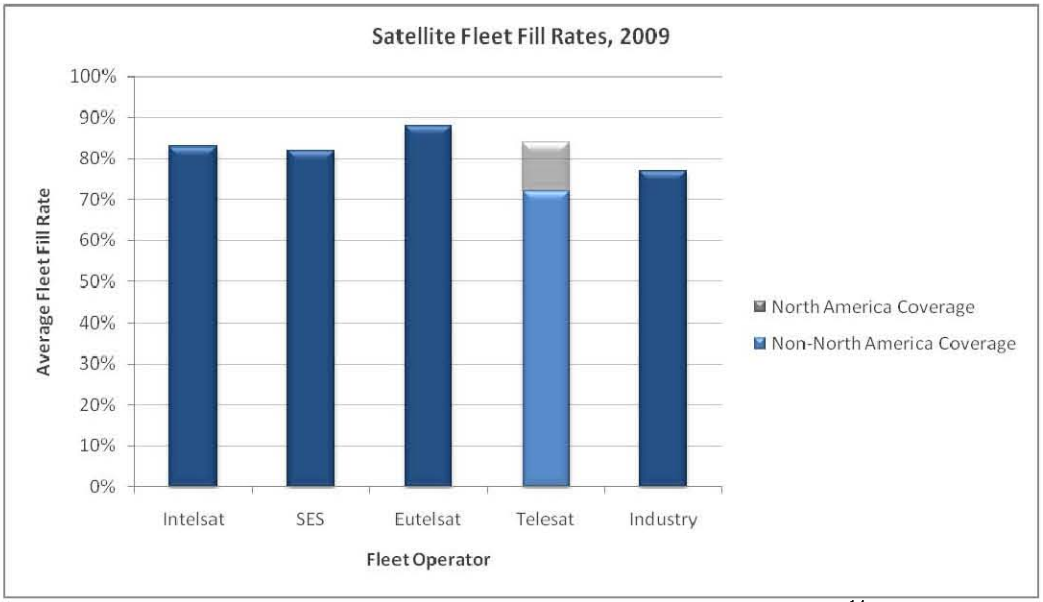


Figure 4. Average Satellite Fill Rates for Four Largest FSSOs.[14]

IV. Further Satellite Operator Consolidation Threatens Already Limited Effective Competition.

Inasmuch as the dominant satellite operators are not significantly investing in incremental new capacity in the FSS fleet, SNSPs face increasing challenges in obtaining space segment, securing flexibility in capacity specifications and coverage, and controlling costs of space segment — the most significant element of their total solution price. The result is a lack of effective competition that impacts not only the SNSPs, but their end user customers as well. When these considerations are coupled with the anticompetitive practices of the dominant satellite operators' wholly-owned SNSPs, as described in the Orbit Act Report, the reality is that this market is anything but competitive. This is particularly detrimental to major SNSP customers, such as the U.S. government.

[14] Intelsat, *2009 Annual Report on Form 10-K.* Intelsat, *2009 Unaudited Reconciliation of Net Loss to EBITDA*; Space News, *Cash-flush Satellite Operators See Divergent Paths to Greater Profits*, 2 August 2010; Eutelsat, *2009-2010 Annual Results*, 28 July 2010; Telesat, *2009 Annual Results*, 3 March 2010.

C. The Commission Should Address Structural Issues and Take Steps to Regulate Anti-Competitive Practices Regarding International FSS Space Segment Capacity

Clearly, policy changes are warranted in light of the fact that the market for international space segment capacity usable for international network services is not subject to "effective competition." Structural issues such as the predominant carriers' effective control over the preponderance of international orbital slots for international FSS communications entail multiple considerations, clearly warranting one or more Commission proceedings to ensure not only that orbital slots are distributed in a more rational manner so as to promote competition, but also that, as a condition for retaining current orbital slots, satellite operators must deploy replacement satellites that increase aggregate capacity and utilize spectrally efficient satellite technology to support FSS operations.

For the immediate future, the Commission should adopt the following presumptions and policies:

(1) No further consolidation in the satellite space segment industry should occur. If allowed, SNSPs and their customers will only pay more for and have access to less essential segment space.

(2) As long as affiliates of dominant satellite operators compete as providers of satellite network services, all requests for FSS space segment capacity should be received and handled by the satellite operator, not its Captive SNSP. Captive SNSPs should not have a role in setting the rates, terms and conditions for space segment made available to other SNSPs or other customers.

(3) Satellite operators should not obligate SNSPs to acquire pre-determined bundles of FSS space segment capacity either in terms of minimum commitments of aggregate capacity or in terms of a fixed combination of their own and/or another satellite operator's capacity.

(4) Satellite operators, or their wholly-owned subsidiaries, should not resell space segment capacity of other satellite operators, as this creates an inappropriate level of visibility into their competitors pricing and terms of sale.

These policies will support a more rational market for FSS space segment capacity.[15]

D. CONCLUSION

WHEREFORE, the premises considered, CapRock urges the Commission to recognize in its Fourth Report to Congress under the Com Sat Act the severe competitive concerns that exist in the market for international satellite services and adopt policies consistent with CapRock's comments herein.

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15 *Lockheed Martin Corporation, COMSAT Corporation, and COMSAT Digital Teleport, Inc., Assignors and Intelsat, Ltd., Intelsat (Bermuda), Ltd., Intelsat LLC, and Intelsat USA License Corp., Assignees Applications for Assignment of Earth Station and Wireless Licenses and Section 214 Authorizations and Petition for Declaratory Ruling*, Order and Authorization, 17 FCC Rcd. 27732 (rel. Oct. 25, 2002) ¶¶ 33-34.